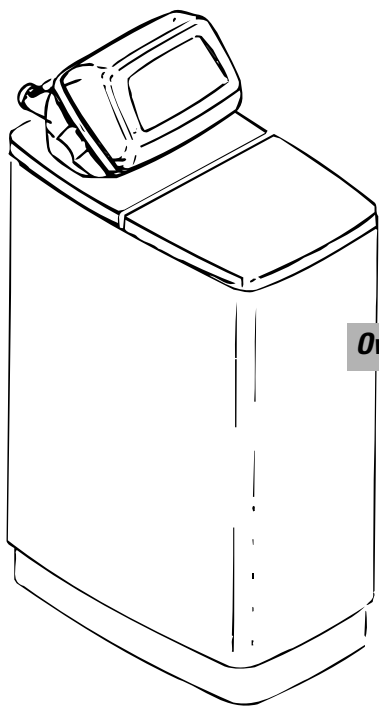




GE Appliances

Profile Performance Series™
Water Softening System



Owner's Manual

PNSF39Z01

GE Answer Center® 800.626.2000

Congratulations!

You Are Now Part of the GE Family.

Welcome to the GE family. We're proud of our quality products and we are committed to providing dependable service. You'll see it in this easy-to-use Owner's Manual and you'll hear it in the friendly voices of our customer service department.

Best of all, you'll experience these values each time you use your water system. That's important, because your new system will be part of your family for many years. And we hope you will be part of ours for a long time to come.

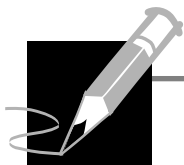
We thank you for buying GE. We appreciate your purchase, and hope you will continue to rely on us whenever you need quality appliances for your home.



Important!

Staple sales slip or cancelled check here.

Proof of the original purchase date is needed to obtain service under the warranty.



Write the model and serial numbers here.

#

#

You can find them on the back of the control head.

GE & You, A Service Partnership.

Ask any GE appliance owner and they will tell you we stand behind our products with unmatched quality service. However, did you know that most questions result from simple problems that you can easily fix yourself in just a few minutes? This Owner's Manual can tell you how.



Read this Manual

Inside you will find many helpful hints on how to use and maintain your water system properly. Just a little preventive care on your part can save you a great deal of time and money over the life of your system.



Review the Section on Troubleshooting Tips

You'll find many answers to common problems here. If you review our chart of Troubleshooting Tips first, you may not need to call for service at all.



If You Need Service

If you do need service, you can relax knowing help is only a phone call away. A list of toll-free customer service numbers is included in the back section. Or you can always call the GE Answer Center® at 800.626.2000, 24 hours a day, 7 days a week.

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Safety Information

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Troubleshooting Tips

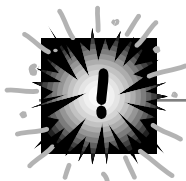
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Customer Service

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

⚠ WARNING!

For your safety, the information in this manual must be followed to minimize the risk of electric shock, property damage or personal injury.



SAFETY PRECAUTIONS

- Check with your state and local public works department for plumbing and electrical codes. You must follow these guidelines.
- Use care when handling the water softening system. Do not turn upside down, drop, or set on sharp protrusions.
- Water softening systems using sodium chloride (salt) for regeneration add sodium to the water. *Persons on sodium restricted diets should consider the added sodium as part of their overall intake.*
- The water softening system works on 24 volt-60 Hz Electrical power only. *Be sure to use only the included transformer.*



PROPER INSTALLATION

This water softening system must be properly installed and located in accordance with the Installation Instructions before it is used. If you did not receive Installation Instructions, you can receive one by calling us toll-free at the GE Answer Center® 800.626.2000.

- Install or store where it will not be exposed to temperatures below freezing or exposed to any type of weather. Water freezing in the system will break it. Do not attempt to treat water over 100°F.
 - **Do not** install in direct sunlight. Excessive sun heat may cause distortion or other damage to non-metallic parts.
 - Properly ground to conform with all governing codes and ordinances. Follow details in Installation Instructions.
 - Use only *lead-free solder and flux* for all sweat-solder connections, as required by state and federal codes.
 - The water softening system requires a minimum water flow of three gallons per minute at the inlet. Maximum allowable inlet water pressure is 125 psi. If daytime pressure is over 80 psi, night time pressure may exceed the maximum. Use a pressure reducing valve if necessary. (Adding a pressure reducing valve may reduce the flow.)
- ▲ WARNING:** Discard all unused and packaging material after installation.

SPECIFICATION GUIDELINES.

Rated capacity

See rating label located on the softener.

Amount of high capacity resin (lbs/cu. ft)

52/1

Resin tank nominal size (in., dia. x height)

10 x 35

Service flow rate (gpm)

See rating label located on the softener.

Water supply maximum hardness (gpg)*

110

Water supply maximum clear water iron (ppm)*

8

Water pressure limits (min-max psi)

20–125

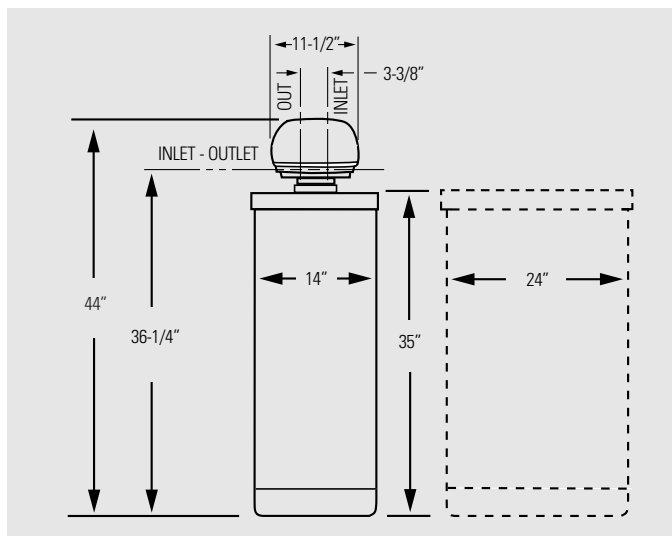
Water temperature maximum (°F)

120

Water supply minimum flow rate (gpm)

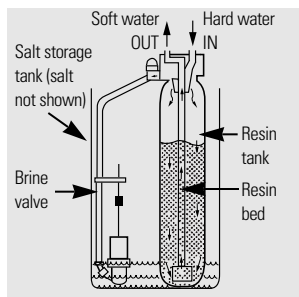
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*Determined by water analysis from a qualified water testing laboratory.



About the water softening system.

Service



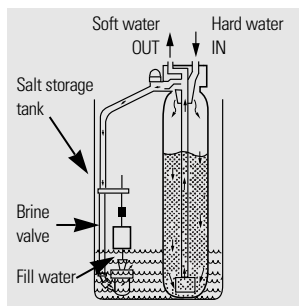
When the water softening system is providing soft water, it is called “Service.” During service, hard water flows from the house main water pipe into the water softening system. Inside the water softening system resin tank is a bed made up of thousands of tiny, plastic resin beads. As hard water passes through the bed, each bead attracts and holds the hardness minerals. This is called ion-exchanging. It is much like a magnet attracting and holding metals. Water without the hardness minerals (soft water) flows from the water softening system and to the house pipes.

After a period of time, the resin beads become coated with hardness minerals and they have to be cleaned. This cleaning is called regeneration, or recharge. Regeneration is started at 2:00 AM (factory setting) by the water softening system timer, and consists of five stages or cycles. These are **FILL**, **BRINING**, **BRINE RINSE**, **BACKWASH** and **FAST RINSE**.

Automatic Hard Water Bypass During Regeneration

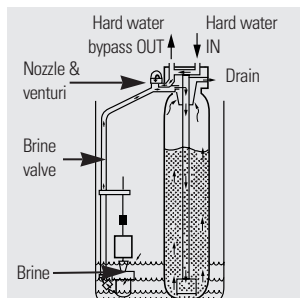
For emergency needs, hard water is available to the home during the regeneration cycles. **However, you should avoid using HOT water because the water heater will fill with the hard water.**

Fill



Salt dissolved in water is called brine. Brine is needed to clean the hardness minerals from the resin beads. To make the brine, water flows into the salt storage area during the fill stage as shown.

About the water softening system.



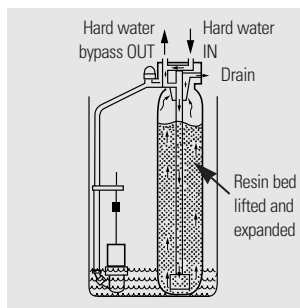
Brining

During brining, brine travels from the salt storage area into the resin tank. Brine is the cleaning agent needed to remove the hardness minerals from the resin beads. The hardness minerals and brine are discharged to the drain.

The nozzle and venturi create a suction to move the brine, maintaining a very slow rate to get the best resin cleaning with the least salt.

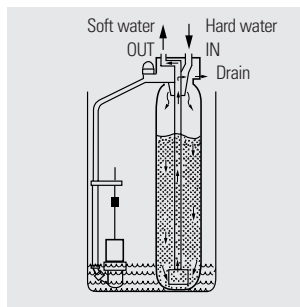
Brine Rinse

After a pre-measured amount of brine is used, the brine valve closes. Water continues to flow in the same path as during brining, except for the discontinued brine flow. Hardness minerals and brine flush from the resin tank to the drain.



Backwash

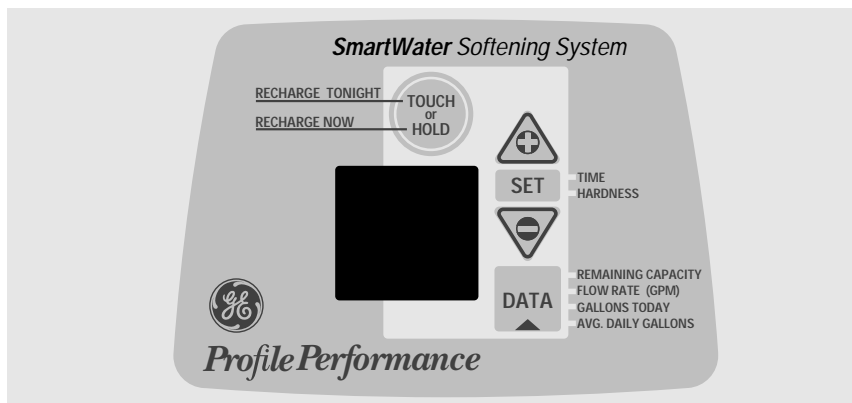
During backwash, water travels **up** through the resin tank at a fast flow rate, flushing accumulated iron, dirt, and sediments from the resin bed and to the drain.



Fast Rinse

Backwash is followed by a fast flow of water **down** through the resin tank. The fast flow flushes brine from the bottom of the tank, and packs the resin bed.

After fast rinse, the water softening system returns to soft water service.



Timer Settings Required

Upon installation and after an extended power outage. See the *Program Memory* section.



NOTES:

- When the transformer is plugged into the electrical outlet 12:00 AM is flashing and **PRESENT TIME** shows in the display area. Program the timer as instructed below. If **PL--** is flashing, see the *Model Code* section.
- A “beeper” sounds while pressing buttons for timer programming. One beep signals a change in the timer display. Repeated beeps mean the timer will not accept a change from the button you have pressed and you should use another button.
- To set the timer, you will use the UP, DOWN and SET buttons.

About the water softening system.

Set Present Time of Day

NOTE: If the words **PRESENT TIME** do not show in the display, press the **SET** button until they do.

- 1 Press the UP or DOWN button to set. The UP button moves the display ahead; the DOWN button moves the time backward. If the present time is between noon and midnight, be sure PM shows . If the present time is between midnight and noon, be sure AM shows .

NOTES: Each press of an UP or DOWN button changes the time by one minute. Holding the button in changes the time 32 minutes each second.

- 2 When the present time shows in display, press **SET** to apply.

Set Water Hardness Number

NOTE: If **HARDNESS** does not show in the display, press **SET** button until it does.

- 1 Press the UP or DOWN button to set your water hardness number in the display. The DOWN button moves the display down to 1. The UP button moves the display up to 110.

NOTE: Each press of an UP or DOWN button changes the display by 1 between 1 and 25. Above 25, the display changes 5 at a time...25, 30, 35, etc. Holding a button in changes the numbers twice each second.

- 2 When the water hardness number shows, press **SET** to apply.

You can get the grains per gallon (gpg) hardness of your water supply from a water analysis laboratory, or call and ask your local water department, if you are on a municipal supply.

Normal Operation, Timer Displays

During normal operation, the present time of day and AM or PM shows in the time display area **4:11^{PM}**. When the demand computer determines a regeneration is needed, **RECHARGE** **TONIGHT** begins to flash in the display, along with the present time. **RECHARGE TONIGHT** **12:22^{PM}** flashes until the next regeneration start time, then changes to **RECHARGE NOW**, which flashes until the regeneration is over. The display also shows the current cycle in the regeneration process. When the valve is in transition between cycles, both indicators flash.

Feature: Optional Recharge Controls

Sometimes, a manually started regeneration (recharge) may be desired or needed. *Two examples:*

- You have used more water than usual (house guests, extra washing, etc.) and you may run out of soft water before the next regeneration.
- You did not refill the storage tank with salt.

Use one of the following features to start a regeneration immediately or at the next preset regeneration start time.

RECHARGE NOW

Press and *hold* the **TOUCH** or **HOLD** button until **RECHARGE NOW** starts to flash in the time display area. The water softening system begins an immediate regeneration and, when over in about two hours, you will have a new supply of soft water. Once started, you cannot cancel this regeneration.

RECHARGE TONIGHT

Touch (do not hold) the **TOUCH** or **HOLD** button. **RECHARGE TONIGHT** flashes in the time display area. A regeneration will occur at the next preset regeneration start time. If you decide to cancel this regeneration, touch the same button once more.



About the water softening system.

Feature: Program Memory

If electrical power to the water softening system is interrupted, the time display is blank, but the timer keeps correct time for about 72 hours. When power is restored, you have to reset the present time only if the display is flashing. All other settings are maintained and never require resetting unless a change is desired.

If the time is flashing after a long power outage, the water softening system continues to work as it should to provide you with soft water. However, regenerations may occur at the wrong time of day until you reset the timer to the correct time of day.

Feature/Service: Automatic Electronic Diagnostics

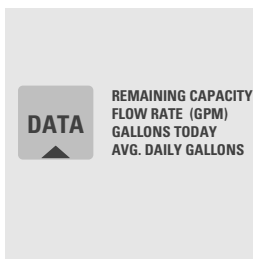
The timer computer has a self-diagnostic function for the electrical system (except input power and water meter). The computer monitors the electronic components and circuits for correct operation. If a malfunction occurs, an error code appears in the timer display.

The chart on *Error Codes*, shows the error codes that could appear and possible defects for each code. While an error code is displayed, the **TOUCH** or **HOLD** and **DATA** buttons remain operable so you can perform the *Manually Initiated Electronic Diagnostics*.


ERROR CODE DISPLAYED	ERR 01	ERR 02	ERR 03	ERR 04	ERR 05
POSSIBLE DEFECT	<ul style="list-style-type: none"> • motor inoperative • wiring harness or connection to switch • position switch • timer (PWA) 	<ul style="list-style-type: none"> • position switch • timer (PWA) 	<ul style="list-style-type: none"> • motor inoperative or wiring harness • timer (PWA) 	<ul style="list-style-type: none"> • position switch or wiring harness • timer (PWA) 	<ul style="list-style-type: none"> • timer (PWA)

To remove an error code: (1) *Unplug transformer.*
 (2) *Correct defect.*
 (3) *Plug transformer in.*
 (4) *Wait for at least 6 minutes. The error code will return if the reason for the error code was not corrected.*


Feature: Other Data Displays




By continuing to press the **DATA** button, you can scan through four displays of operational information. This data appears in the bottom portion of the display area.

REMAINING CAPACITY—  This is the percentage of water softening capacity remaining. Immediately after a regeneration, 100% shows. As water is used, the percentage decreases until the next regeneration. During regenerations, the percentage increments upward.

NOTE: Zero (%) shows until after the first regeneration begins, after connecting to electrical power.

FLOW RATE, GPM—  When using soft water, this display shows the flow rate passing through the softener (in gallons per minute). Zero shows if water is not passing through the water softening system.

GALLONS TODAY—  Each day, beginning at midnight, the timer keeps a running count of the total gallons of water that have passed through the water softening system.

AVG. DAILY GALLONS—  The figure displayed is the average gallons of water used by the household each day over the past seven day period.

NOTE: If preferred, you can set the timer to show the reading in liters instead of gallons. If **GALLONS TODAY** or **AVG. DAILY GALLONS** exceeds 9999, a (x10) indicator appears. This means you must multiply the number shown by ten.

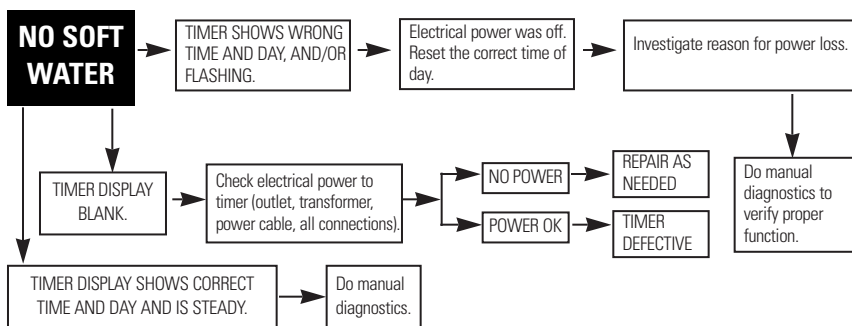
About the water softening system.

Service: Timer/Water Softening System, Service Checkout Procedure

If you are not getting soft water, and an error code is not displayed, use the procedures below to find the problem. First make the following visual checks.

- VISUAL CHECKS:**
- 1** Is there electrical power to the outlet the water softening system transformer is plugged into?
 - 2** Is there sufficient salt in the storage tank?
 - 3** Is the plumbing bypass valve directing water for soft water service?
 - 4** Is the valve drain hose open to the drain, not elevated too high, and unobstructed?

If you do not find a problem with the visual checks, continue below.



Service: Manually Initiated Electronic Diagnostics



- 1** To enter diagnostics, press and hold the **DATA** button until the display appears as shown.

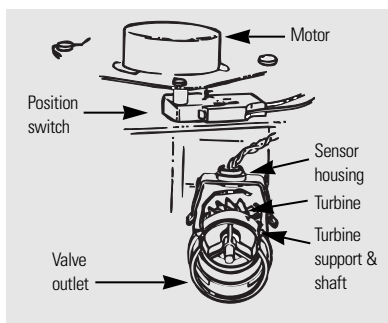
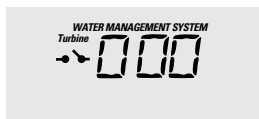
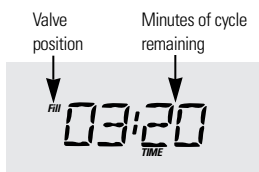
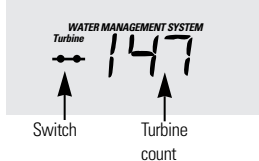
NOTE: If the water softening system is in the middle of a regeneration, top part of the display shows the cycle of regeneration and minutes of the cycle remaining. If two cycle names are flashing, the valve is in transition between the cycles.

A The three digits under **WATER MANAGEMENT SYSTEM** indicate water meter operation as follows:

- 000 (steady) = soft water not in use...no flow through the meter.

—**OPEN A NEARBY SOFT WATER FAUCET**—

- 000 to 199 (continual) = repeats display for each gallon of water passing through the meter.





If you don't get a reading in the display, with faucet open, pull the sensor from the valve outlet port. Pass a small magnet back and forth in front of the sensor. You should get a reading in the display. If you get a reading, unhook the in and out plumbing and check the turbine for binding.

About the water softening system.

Service: Manually Initiated Electronic Diagnostic

B This display segment (—→↘—), in the following chart, indicates an open POSITION switch. The other indicates a closed switch. Use the **TOUCH** or **HOLD** button to manually advance the valve into each cycle and check correct switch operation.

CORRECT SWITCH DISPLAYS	VALVE CYCLE STATUS
	Valve in service, fill, brining, backwash or rinse position.
	Valve rotating from one position to another.



- 2** Press the **DATA** button again. This diagnostic display shows the total number of recharges (top) since the timer was connected to electrical power.

The number of days since the timer was connected to electrical power is shown in the bottom part of the display. If over 1999 days, a (x10) indicator shows, meaning you must multiply the number shown by 10.

- 3** Press **DATA** once again to return the present time to the display.

Service: Manually Advanced Regeneration Check

This check verifies proper operation of the valve motor, brine tank fill, brine draw, regeneration flow rates and other controller functions. First, make the initial checks and the *Manually Initiated Electronic Diagnostics*.

NOTE: The face plate display must show a steady time (not flashing).

- 1** Press the **TOUCH** or **HOLD** button and hold for three seconds. **RECHARGE NOW** begins to flash as the water softening system enters the fill cycle of regeneration. Remove the brinewell cover and, using a flashlight, observe fill water entering the brine tank. If water does not enter the tank, look for an obstructed nozzle, venturi, fill flow plug, brine tubing, or brine valve riser pipe.
- 2** After observing fill, press the **TOUCH** or **HOLD** button to move the water softening system into brining. A slow flow of water to the drain will begin. Verify brine draw from the brine tank by shining a flashlight into the brinewell and observing a noticeable drop in the liquid level.

NOTE: Be sure a salt bridge is not preventing water with salt contact.

If the water softening system does not draw brine, check:

- nozzle and/or venturi dirty or defective.
- nozzle and venturi not seated properly on gasket.
- restricted drain (check drain fitting and hose).
- defective nozzle and venturi seal.
- other inner valve defect (rotor seal, rotor & disc, wave washer, etc.)

NOTE: If water system pressure is low, an elevated drain hose may cause back pressure, stopping brine draw.

- 3** Again, press the **TOUCH** or **HOLD** button to move the softener into backwash. Look for a fast flow of water from the drain hose. A slow flow indicates a plugged top distributor, backwash flow plug, or drain hose.
- 4** Press **TOUCH** or **HOLD** to move the water softening system into fast rinse. Again look for a fast drain flow. Allow the water softening system to rinse for a few minutes to flush out any brine that may remain in the resin tank from the brining cycle test.
- 5** To return the water softening system to service, press **TOUCH** or **HOLD**.

About the water softening system.

Service: Regeneration and Heavy Duty Backwash

NOTE: Each of the following functions has a factory set default value. The defaults are: Regeneration start time **-2:00AM**; Maximum days between regenerations **-0** (display shows **dY-**); Heavy duty backwash **-OFF**. The defaults are suitable for most installations. However, depending on water supply quality, household peak water use hours, etc., adjustment is available to meet specific needs. To make a change, read and do the following.

Regeneration (Start) Time: At the 2:00 AM regeneration start time, the water softening system begins regeneration at that time, ending at about 4:00 AM. This is a good time in most households because water is not in use (see *Automatic Hard Water Bypass During Regeneration* section). If a different time would be better for your needs, do steps 1, 2, 3, 5 and 7 below to change the starting hour.

Maximum Days Between Regeneration: The default setting allows the timer to control regeneration frequency based on water usage readings from the water meter. It provides the most economical operation. You can set a maximum time (in days) between regenerations. For example, no more than three days will pass without a regeneration occurring if you set **dY 3** in the display. A 1 to 7 day setting is available. To make a change from the default setting, do steps 1, 3, 4, 5 and 7 below.

Heavy Duty Backwash: When set to **ON**, the backwash cycle of regeneration will be 10 minutes long instead of the normal seven minute length. This is beneficial on some water supplies high in iron or sediment content. To conserve water, on clean supplies, be sure **OFF** shows. To change this setting, do steps 1, 3, 5, 6 and 7 below.



- 1 Beginning from the present time display, press and hold in the **SET** button until **2:00-** begins to flash.
- 2 Press the UP or DOWN button to display the desired start time. The UP button moves the time ahead; the DOWN button moves the time backward.
- 3 Press the **SET** button again, and **dY -** flashes.
- 4 To set a maximum time (in days) between regenerations, press the UP or DOWN button.
- 5 Press the **SET** button to display **OFF**.
- 6 Use the UP button to change the display to **ON** to increase the backwash time, if desired.

Setting: Model Code, 12 or 24 Hour Clock and Gallons or Liters Measured

Model Code: The timer must have the right model code set to operate the water softening system correctly. The correct code setting is **PL31**.

If **PL--** is flashing in the display, do steps 3, 4, 6 and 8 below.

To check for the correct code setting for your model, and to reset it if needed, do steps 1, 2, 3, 4, 6 and 8 below.

NOTE: The hour clock and water measure have factory set default values. The defaults are: 12 or 24 hour clock — **12**; Gallons or liters measure — **gallons**.

12 or 24 Hour Clock: With 12 hr set, all time displays are in standard clock time ...12:00 AM to 11:59 PM. If 24 hr is set, time displays are in military time ...0100 (1:00 AM) to 0000 (midnight). To change from the 12 hr setting, do steps 1, 2, 4, 5, 6 and 8.

Gallons or Liters Measure: All water flow rate and usage displays are in gallons with the default **GALS** setting. If reset to **LITR**, the same displays are shown in liters. Use steps 1, 2, 4, 6, 7 and 8 to change.

- 1 Beginning from the present time display, press and hold in the **SET** button until **2:00** (or as otherwise set) begins to flash.
- 2 Press and hold in the **SET** button again. Either **PL--** or a previously set code will appear.
- 3 If setting is other than **PL31**, use the UP or DOWN button to set the correct PL number. The correct setting is **PL31**.
- 4 Press the **SET** button again, and **12 hr** flashes.
- 5 To change the display to **24 hr** use the UP button. Use the DOWN button to reset to 12 hr.
- 6 Press the **SET** button and **GALS** flashes.
- 7 Use the UP button to change to the **LITR** setting. Use the DOWN button to return to the gallon setting.
- 8 Press the **SET** button a final time to return to the present time display.

Care and cleaning of the water softening system.

Checking the Salt Storage Level and Refilling

Brine (salt dissolved in water) is needed for each and every regeneration. The water for making brine is metered into the salt storage area by the water softening system valve and timer. ***However, you must keep the tank full of salt.***

When to refill with salt: Check the salt level a few weeks after you install the water softening system and every week after that. Refill when the brine tank is from 1/3 to 1/2 full. Never allow the water softening system to use all the salt before you refill it. Without salt, you will soon have hard water.

Use clean water softening salts only, at least 99.5% pure. NUGGET, PELLET or coarse SOLAR salts are recommended. ***Do not use rock, block, granulated or ice cream making salts.*** They contain dirt and sediments, or mush and cake, and will create maintenance problems.

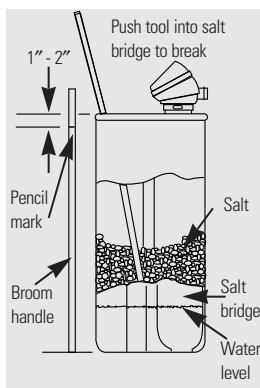
▲ CAUTION: Water softening salt with iron removing additives: Some salts have an additive to help the water softening system handle iron in the water supply. Although this additive may help to keep the water softening system resin clean, it may also release corrosive fumes that weaken and shorten the life of some water softening system parts. ***Do not*** use salt with iron removing additives.

Cleaning Iron Out of the Water Softening System

Your water softening system takes hardness minerals (calcium and magnesium) out of the water. Also, it can control some (see *Specification Guidelines* section) “clear water” iron. With clear water iron, water from a faucet is clear when first put into a glass. After 15 to 30 minutes, the water begins to cloud or turn rust colored. A water softening system ***will not*** remove any iron that makes the water cloudy or rusty as it comes from the faucet (called red water iron). To take red water iron out of water, or over the maximum of clear water iron, an iron filter or other equipment is needed.

If your water supply has clear water iron, periodic resin bed cleaning is needed. Clean the bed at least every six months, or more often if iron appears in the soft water between treatments, using a resin bed cleaner. Follow directions on the resin bed cleaner container. Resin bed cleaner is available from most hardware stores.

Breaking a Salt Bridge



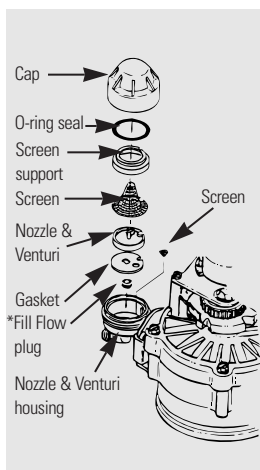
Sometimes, a hard crust or salt bridge forms in the salt storage area. It is usually caused by high humidity or the wrong kind of salt. When the salt bridges, an empty space forms between the water and salt. Then salt will not dissolve in the water to make brine.

If the brine tank is full of salt, it is hard to tell if you have a salt bridge. Salt is loose on top, but the bridge is under it. The following is the best way to check for a salt bridge.

Salt should be loose all the way to the bottom of the tank. Take a broom handle or like tool, and carefully push it down into the salt, working it up and down. If the tool strikes a hard object (be sure it's not the bottom or sides of the tank), it's most likely a salt bridge. Carefully break the bridge with the tool. **Do not** pound on the walls of the tank.

If the wrong kind of salt made the bridge, take it out. Then fill the tank with nugget or pellet salt only. In humid areas, it is best to fill with less salt, more often.

Cleaning the Nozzle and Venturi Assembly



A clean nozzle and venturi is needed for the water softening system to work properly. This small unit makes the suction to move brine from the salt storage area to the resin tank during regeneration. If it becomes plugged with sand, dirt, etc., the water softening system will not work and you will get hard water.

To get to the nozzle and venturi remove the water softening system top cover. Be sure the water softening system is in service cycle (no water pressure at nozzle and venturi). Then, while holding the nozzle and venturi housing with one hand, remove the cap. Lift out the screen support and screen, then the nozzle and venturi. Wash and rinse the parts in warm water until clean. If needed, use a small brush to remove iron or dirt. Also check and clean the gasket.

NOTE: Some models have a small flow plug located in the nozzle and venturi, and/or a small cone shaped screen in the housing. Be sure to check and clean these parts, if your model is so equipped.

Carefully replace all parts in the correct order. Lightly lubricate the o-ring seal with clean silicone grease or petroleum jelly and place in position. **Install and tighten the cap, by hand only. Do not over-tighten the cap or housing.**

IMPORTANT: Be sure small holes in the gasket are centered directly over the small holes in the nozzle and venturi housing.

***INSTALL WITH NUMBERED SIDE UP, CONCAVE SIDE DOWN**

Before you call for service...



Troubleshooting Tips

Review the charts on the following pages first and you may not need to call for service.

Problem	Possible Causes	What To Do
Water feels slippery after installation of water softening system	Absence of hardness minerals	<ul style="list-style-type: none"> This is normal.
Water softening system not using any salt	Water softening system is a “demand” unit	<ul style="list-style-type: none"> Does not use much salt to regenerate—very efficient.
	Possible salt bridge	<ul style="list-style-type: none"> See the <i>Care and Cleaning</i> section.
	Possible plugged nozzle and venturi	<ul style="list-style-type: none"> See the <i>Care and Cleaning</i> section.
Water is blue color after water softening system was installed	Acidic water in copper plumbing	<ul style="list-style-type: none"> Have the water tested at once. <p>⚠ WARNING: Do not drink the water until problem has been corrected.</p>
Water softening system not regenerating	Meter turbine stuck	<ul style="list-style-type: none"> Call for service.
	Sensor wire corroded	<ul style="list-style-type: none"> Call for service.
	Faceplate defective	<ul style="list-style-type: none"> Call for service.
	No power to unit	<ul style="list-style-type: none"> Check the circuit breaker or fuses.
Cloudiness on glassware (automatic dishwashers)	Combination of soft water and too much detergent	<ul style="list-style-type: none"> This is called <i>etching</i> and is permanent. To prevent this from happening, use less detergent if you have soft water. Wash glassware in the shortest cycle that will get them clean.
Salty tasting water after installation	Insufficient backwash and rinse time	<ul style="list-style-type: none"> Increase backwash time. See the <i>Service: Regeneration and Heavy Duty Backwash</i> section.
	Low water pressure	<ul style="list-style-type: none"> Check pressure; should be minimum 20 psi.
	Restricted drain hose	<ul style="list-style-type: none"> Clean and reconnect hose.

Problem	Possible Causes	What To Do
No soft water	Faucet or fixture where sample was taken not plumbed to soft water. NOTE: Be sure sample is from a faucet that does not mix soft and hard water. For example, a single lever kitchen faucet, if the cold side is plumbed to hard water	<ul style="list-style-type: none"> •To conserve salt, the installer may have isolated some fixtures (outside faucets, toilets, etc.) from soft water. From the outlet of the water softening system, trace the water flow path, in house plumbing. If soft water is not directed to a faucet or fixture where wanted, consult a plumber.
	No salt in the brine tank or salt bridged	<ul style="list-style-type: none"> •Check for a salt bridge or, if the tank is empty, refill with recommended salt. Press (for 3 seconds) the TOUCH - HOLD button to start an immediate regeneration and restore soft water supply.
	Transformer unplugged at wall outlet or power cable to softener not connected	<ul style="list-style-type: none"> •Check for a loss of electrical power to the water softener system, due to any of these conditions and correct as needed. With the power supply restored, observe the faceplate time display and read <i>Program Memory</i> section.
	Fuse blown or circuit breaker popped on circuit to electrical outlet	
	Electrical outlet on a circuit that can be switched off	NOTE: The electrical outlet for the softener should be continuously live so it cannot be accidentally switched off.
	Manual bypass valve in bypass position	<ul style="list-style-type: none"> •Be sure the bypass valve stem is positioned properly. Observe instruction on the decal at the end of the stem.
	Valve drain hose pinched, plugged, elevated too high or otherwise restricted	<ul style="list-style-type: none"> •Any restriction in this drain hose may prevent proper operation of the nozzle and venturi and reduce or prevent brine draw during regenerations.
	Nozzle and venturi dirty, incorrectly assembled or damaged	<ul style="list-style-type: none"> •With water pressure to the water softening system off, take the nozzle assembly apart, inspect, clean and replace as needed. Any foreign particle(s), scratches, nicks, etc., in the passages can prevent operation. Be sure holes in the gasket are centered over holes in the housing.

Before you call for service...



Troubleshooting Tips

Problem	Possible Causes	What To Do
Resin beads showing up in drinking water and sink	Cracked distributor	<ul style="list-style-type: none"> • Call for service.
Sounds you might hear	Running water from the unit into a drain	<ul style="list-style-type: none"> • This is normal.
Water has air bubbles and is cloudy	Air in system after installation	<ul style="list-style-type: none"> • Will go away after it runs for a while.
Water hard sometimes	Using hot water while the water softening system is regenerating	<ul style="list-style-type: none"> • Avoid using hot water during water softening system regenerations because the water heater will refill with hard water. See <i>Automatic Hard Water Bypass During Regeneration</i> section.
	Timer hardness number setting too low	<ul style="list-style-type: none"> • Press and release the SET button until HARDNESS shows in the display. Be sure the number shown is the same as the actual grains per gallon hardness of your water supply. See the <i>Timer</i> section if a change in the setting is needed.
	Grains of hardness in your water supply have increased	<ul style="list-style-type: none"> • Water hardness can change over time, especially in well water. To check, have the water tested by a water analysis laboratory or call your local water department. Adjust the hardness number setting as needed.



GE Appliances

**Consumer Product
Ownership Registration
Important Mail Today**

Place in an envelope and mail to:

General Electric Company
Warranty Registration Department
P.O. Box 34070
Louisville, KY 40232-4070

Consumer Product Ownership Registration

Dear Customer:

Thank you for purchasing our product and thank you for placing your confidence in us. We are proud to have you as a customer!

Follow these three steps to protect your new appliance investment:

- 1

Complete and mail your Consumer Product Ownership Registration today. Have the peace of mind of knowing we can contact you in the unlikely event of a safety modification.
- 2

After mailing the registration below, store this document in a safe place. It contains information you will need should you require service. Our service number is 800-GE-CARES. (800-432-2737).
- 3

Read your "Owner's Manual" carefully. It will help you operate your new appliance properly. If you have questions, or need more information call the GE Answer Center® 800.626.2000.

Product	Model	Serial
WATER TREATMENT		

Important: If you did not get a registration card with your product, detach and return the card below to ensure that your product is registered.

Scissors icon

Consumer Product Ownership Registration

Product	Model	Serial
WATER TREATMENT		

Mr. ☐ Ms. ☐ Mrs. ☐ Miss ☐

First Name

Last Name

Street Address

Apt. #

City

State

Zip Code

Date Placed In Use

Month

Day

Year

Phone Number

Important Mail Today!

Scissors icon

GE logo

GE Appliances

GE Water Softening System Warranty



All warranty service provided by our SmartWater™ Authorized Servicer Network. For service, call 800-GE-CARES.

For The Period Of:	GE Will Replace:
One Year From the date of the original purchase	Any part of the Water Softening System which fails due to a defect in materials or workmanship. During this full one-year warranty , GE will also provide, free of charge , all labor and in-home service to replace the defective part.
Three Years From the date of the original purchase	The electronic monitor , if it fails due to a defect in materials or workmanship. During this three-year limited warranty , you will be responsible for any labor or in-home service costs.
Ten Years From the date of the original purchase	A replacement cabinet (brine tank) or resin tank , if either fails due to a defect in materials or workmanship. During this ten-year limited warranty , you will be responsible for any labor or in-home service costs.

What GE Will Not Cover:

- Service trips to your home to teach you how to use the product.
- Improper installation.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Filters, membranes or batteries.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage to personal property caused by possible defects with this appliance.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

Service Telephone Numbers.



GE Answer Center® 800.626.2000

The GE Answer Center® is open 24 hours a day, 7 days a week.



In-Home Repair Service 800-GE-CARES (800-432-2737)

Expert GE repair service is only a phone call away.



Special Needs Service 800.626.2000

TDD 800-TDD-GEAC (800-833-4322)

GE offers, free of charge, Braille controls for a variety of GE appliances and a brochure to assist in planning a barrier-free kitchen for persons with limited mobility.



Service Contracts 800-626-2224

Purchase a GE service contract while your warranty is still in effect and you'll receive a substantial discount. GE Consumer Service will still be there after your warranty expires.



Parts and Accessories 800-626-2002

Individuals qualified to service their own appliances can have parts or accessories sent directly to their homes (VISA, MasterCard and Discover cards are accepted).

Instructions contained in this manual cover procedures to be performed by any user. Other servicing generally should be referred to qualified service personnel. Caution must be exercised, since improper servicing may cause unsafe operation.



Service Satisfaction

If you are not satisfied with the service you receive from GE, follow these steps. **First**, contact the people who serviced your appliance. If you are still not pleased, write all the details—including your phone number—to: Manager, Consumer Relations, GE Appliances, Appliance Park, Louisville, KY 40225.